## ABSTRACT

A device for handling a fluid includes a corona discharge device and an electric power supply. The corona discharge device includes at least one corona discharge electrode and at least one collector electrode positioned proximate each other so as to provide a total inter-electrode capacitance within a predetermined range. The electric power supply is connected to supply an electric power signal to said corona discharge and collector electrodes so as to cause a corona current to flow between the corona discharge and collector electrodes. An amplitude of an alternating component of the voltage of the electric power signal generated is no greater than one-tenth that of an amplitude of a constant component of the voltage of the electric power signal. The alternating component of the voltage is of such amplitude and frequency that a ratio of an amplitude of the alternating component of the highest harmonic of the voltage divided by an amplitude of the constant component of said voltage being considerably less than that of a ratio of an amplitude of the highest harmonic of the alternating component of the corona current divided by an amplitude of the constant component of the corona current, i.e., $(V_{ac}/V_{dc}) \leq (I_{ac}/I_{dc})$.